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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,644	03/20/2002	Claus Hillermeier	32860/000282/US	7432
30596 7590 07/10/2007 HARNESS, DICKEY & PIERCE, P.L.C. P.O.BOX 8910 RESTON, VA 20195			EXAMINER GUILL, RUSSELL L	
			ART UNIT 2123	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/088,644	Applicant(s) HILLERMEIER ET AL.	
	Examiner Russ Guill	Art Unit 2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 7-15, 20-25, 28-36 and 39-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-15, 20-25, 28-36 and 39-43 is/are rejected.
- 7) ☒ Claim(s) 33-43 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to a Request for Continued Examination filed May 7, 2007. Claims 1 - 4, 7 - 15, 20 - 25, 28 - 36 and 39 - 43 are pending. Claims 1 - 4, 7 - 15, 20 - 25, 28 - 36 and 39 - 43 have been examined. Claims 1 - 4, 7 - 15, 20 - 25, 28 - 36 and 39 - 43 have been rejected.
2. **The Examiner would like to thank the Applicant for the well-presented response, which was useful in the examination process. The Examiner appreciates the effort to carefully analyze the Office Action, and make appropriate amendments.**

Continued Examination

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 7, 2007, has been entered.

Response to Remarks

4. Regarding claim 12 potentially rejected under 35 U.S.C. § 101 on the Advisory Action dated April 26, 2007:

4.1. Applicant's arguments have been fully considered, and are persuasive.

Claim Objections

5. Claims 33 – 43 are objected to for minor informalities: The claims all recite the computer program product of claim 13, but claim 13 is directed to a computer readable medium.
6. Claim 33 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The parent claim already has a computer readable medium.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which

it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7.1. Claims 1 - 4, 7 - 15, 20 - 25, 28 - 36 and 39 - 43 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Please refer especially to the specification at paragraphs [0021] - [0024] and [0017] - [0018].

7.1.1. Regarding independent claim 1 and dependent claims, the specification does not appear to describe the complete set of limitations as in the method of claim 1. While each limitation is described in the specification, the complete process does not appear to be described. Further, the first limitation appears to be independent of the remaining limitations, which also does not appear to be described in the specification.

7.1.2. Regarding independent claims 12 and 13 and dependent claims, the claims are rejected for similar reasons as in claim 1 above.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 1-4, 7, 9-15, 20-25, 28, 30-36, 39 and 41-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Microsim ("MicroSim Pspice A/D & Basics+", June 1997) in view of Croix (U.S. Patent No. 6,327,557), further in view of Optimizer ("MicroSim PSpice Optimizer", June 1997).

10.1.1. The art of Microsim is directed to the PSpice circuit simulation software (page 1-2).

10.1.1.1. One feature of the Spice simulator that is described in Microsim is the use of device models that have parameters wherein the parameters appear to be used in device model equations internal to the device model (page 1-10). Although this feature is not relied upon in this action, the internal device model equations represent results of evaluations that were stored, and then used in simulations when the device is included in a circuit. The output of the device would depend on input parameters such as a voltage at various nodes, and constants such as the model parameters.

10.1.2. The art of Optimizer is directed to a circuit optimization program integrated with other MicroSim programs, such as MicroSim PSpice circuit simulation (page xiv) described above.

10.1.3. The art of Croix is directed to building a circuit characterization cell for use in a Spice circuit simulator (**column 1, lines 1 – 65; and column 2, lines 1 – 16**). In summary, Croix describes simulating a circuit at multiple values of input parameters, and storing the resulting output values along with the input parameters in a lookup table. Croix then builds a Spice cell with the lookup table for use in a Spice simulation. During Spice simulation, the cell can simply take the input values to the cell and interpolate an output value (**column 5, lines 2-**

65). This simulation process has the advantage that cells of the circuitry are characterized with higher speed relative to previous techniques.

10.1.4. The art of Microsim and the art of Croix are analogous art because they are both directed to circuit simulation using the Spice simulation software.

10.2. Regarding claim 1:

10.2.1. Microsim appears to teach:

10.2.2. A method for simulation of a technical system (page 1-2, section "What is Pspice A/D");

10.2.3. Microsim does not specifically teach:

10.2.4. Optimizing a set of setting parameters for a required function, the required function being based on the set of setting parameters and a first set of setting constants, the set of setting constants being static during the optimizing, and the set of setting parameters being for design and reaction of the technical system;

10.2.5. Determining a result as a function of the set of setting parameters and based on a request to an external

source, the result being in the form of an influence of the set of setting parameters on the technical system;

10.2.6. temporarily storing the result;

10.2.7. simulating the technical system based on the result and the setting constants;

10.2.8. wherein the influence of each of a plurality of sets of setting parameters on the technical system is determined by checking the external source, the result of this check is temporarily stored, and an additional influence is determined on the basis of the temporarily stored results.

10.2.9. Optimizer appears to teach:

10.2.10. Optimizing a set of setting parameters for a required function, the required function being based on the set of setting parameters and a first set of setting constants, the set of setting constants being static during the optimizing, and the set of setting parameters being for design and reaction of the technical system (pages 1-8 thru 1-10, sections Performance, Evaluation and PSpice Optimizer Expression (especially note in Pspice Optimizer Expression, the use of constants); and pages 6-2 thru 6-4, please note

that in figure 6-1 that resistor values for R1, R2, R3 are constants);

10.2.11. Determining a result as a function of the set of setting parameters and based on a request to an external source, the result being in the form of an influence of the set of setting parameters on the technical system (page xiv, please note that the MicroSim Pspice Optimizer calls the MicroSim Pspice A/D simulator; and page 6-2 and page 6-8, it would have been obvious that the circuit in figure 6-1 was submitted to PSpice A/D for calculating a result);

10.2.12. simulating the technical system based on the result and the setting constants (pages 1-8 thru 1-10, sections Performance, Evaluation and PSpice Optimizer Expression (especially note in Pspice Optimizer Expression, the use of constants));

10.2.13. Croix appears to teach:

10.2.14. Determining a result as a function of the set of setting parameters and based on a request to an external source, the result being in the form of an influence of the

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set of setting parameters on the technical system (column 5, lines 8 - 50);

10.2.15. temporarily storing the result (column 5, lines 8 - 50);

10.2.16. wherein the influence of each of a plurality of sets of setting parameters on the technical system is determined by checking the external source (column 5, lines 8 - 50), the result of this check is temporarily stored (column 5, lines 8 - 50), and an additional influence is determined on the basis of the temporarily stored results (column 5, lines 8 - 50, especially lines 45 - 50, column 9, lines 55-67, and column 10, lines 1-35).

10.2.17. The motivation to use the art of Croix with the art of Microsim would have been the benefits recited in Croix that cells of the circuitry are characterized with both higher speed and higher accuracy relative to previous techniques (**column 2, lines 10-16**), which would have been recognized by the ordinary artisan as a benefit because higher speed means reduced time for simulation.

10.2.18. The motivation to use the art of Optimizer with the art of MicroSim would have been the benefit recited in Optimizer that the program improves the performance of analog circuits (page xiv, first paragraph). The MicroSim reference also points to the Optimizer reference (MicroSim, pages xxvi and xxviii).

10.2.19. Therefore, as discussed above, it would have been obvious to the ordinary artisan at the time of invention to use the art of Croix and the art of Optimizer with the art of Microsim to obtain the claimed invention.

10.2.20. Regarding claim 2:

10.2.21. Microsim appears to teach designing the technical system on the basis of the simulation (page 1-2, section "What is PSpice A/D?", especially "software-based breadboard of your circuit that you can use to refine your design").

10.2.22. Regarding claims 3, 24 and 35:

10.2.23. Microsim appears to teach that the design process includes a change to the technical system (page 1-2, section "What is PSpice A/D?",

especially “software-based breadboard of your circuit that you can use to refine your design”; it would have been obvious that refining a design is a change).

10.2.24. Regarding claims 4, 14, 15, 25 and 36:

10.2.25. Microsim does not specifically teach:

10.2.25.1. redete rmining the influence of the parameters on the technical system by accessing the temporarily stored result.

10.2.26. Croix appears to teach:

10.2.26.1. redete rmining the influence of the parameters on the technical system by accessing the temporarily stored result (column 5, lines 65 - 67, and column 6, lines 1 - 7, and column 1, lines 10 - 67, and column 2, lines 1 - 10).

10.2.27. Regarding claims 7, 28 and 39:

10.2.28. Microsim does not specifically teach that the additional influence is determined by at least one of interpolation or extrapolation.

10.2.29. Croix appears to teach that the additional influence is determined by interpolation (column 6, lines 8-21; and figure 7; and column 9, lines 55-67, and column 10, lines 1-35; and column 4, lines 47-63; it would have been obvious that response times are determined via interpolation of stored results).

10.2.30. Regarding claims 9, 20, 30 and 41:

10.2.31. Microsim does not specifically teach that the external source is at least one of a simulator and an experiment.

10.2.32. Croix appears to teach that the external source is a simulator (column 5, lines 8-27; the simulator Spice is used to calculate characterization values).

10.2.33. Regarding claims 10, 21, 31 and 42:

10.2.34. Microsim does not specifically teach that the simulation is carried out using a plurality of results, without the external source.

10.2.35. Croix appears to teach that the simulation is carried out using a plurality of results, without the external source (figure 9; and column 5, lines 8-27).

10.2.36. Regarding claims 11, 22, 32 and 43:

10.2.37. Microsim appears to teach determining, from the simulation of the technical system, the sensitivity of sets of parameters to changes in the setting constants (pages 12-2 and 12-3, section Parametric Analysis; and page xiii, Chapter 13 Monte Carlo and Sensitivity/Worst-Case Analyses; and page 13-33, section Sensitivity Analysis).

10.2.37.1. Regarding (pages 12-2 and 12-3, section Parametric Analysis; and page xiii, Chapter 13 Monte Carlo and Sensitivity/Worst-Case Analyses; and page 13-33, section Sensitivity Analysis); it would have been obvious to determine, from the simulation of the technical system, the sensitivity of sets of parameters to changes in the setting constants.

10.2.38. Regarding claim 12:

10.2.39. Microsim appears to teach:

10.2.40. an arrangement for simulation a technical system
(page 1-2, section "What is Pspice A/D);

10.2.41. Microsim does not specifically teach:

10.2.42. A processor unit configured to, Optimize a set of setting parameters for a required function, the required function being based on the set of setting parameters and a set of setting constants, the set of setting constants being static during the optimizing, and the set of setting parameters being for design and reaction of the technical system;

10.2.43. Determine a result as a function of the set of setting parameters and based on a request to an external source, the result being in the form of an influence of the set of setting parameters on the technical system;

10.2.44. simulate the technical system based on the result and the setting constants;

10.2.45. a memory adapted to temporarily store the result; wherein the influence of each of a plurality of sets of setting parameters on the technical system is determined by checking the external source, the result of this check is temporarily stored, and an additional influence is determined on the basis of the temporarily stored results.

10.2.46. Optimizer appears to teach:

10.2.47. A processor unit configured to, Optimize a set of setting parameters for a required function, the required function being based on the set of setting parameters and a set of setting constants, the set of setting constants being static during the optimizing, and the set of setting parameters being for design and reaction of the technical system (pages 1-8 thru 1-10, sections Performance, Evaluation and PSpice Optimizer Expression (especially note in Pspice Optimizer Expression, the use of constants); and pages 6-2 thru 6-4, please note that in figure 6-1 that resistor values for R1, R2, R3 are constants);

10.2.48. Determine a result as a function of the set of setting parameters and based on a request to an external source, the result being in the form of an influence of the set of setting parameters on the technical system (page xiv, please note that the MicroSim Pspice Optimizer calls the MicroSim Pspice A/D simulator; and page 6-2 and page 6-8, it would have been obvious that the circuit in figure 6-1 was submitted to PSpice A/D for calculating a result);

10.2.49. simulate the technical system based on the result and the setting constants (pages 1-8 thru 1-10, sections Performance, Evaluation and PSpice Optimizer Expression

(especially note in Pspice Optimizer Expression, the use of constants));

10.2.50. Croix appears to teach:

10.2.51. Determine a result as a function of the set of setting parameters and based on a request to an external source, the result being in the form of an influence of the set of setting parameters on the technical system (column 5, lines 8 - 50);

10.2.52. a memory adapted to temporarily store the result (column 5, lines 8 - 50);

10.2.53. wherein the influence of each of a plurality of sets of setting parameters on the technical system is determined by checking the external source (column 5, lines 8 - 50)., the result of this check is temporarily stored (column 5, lines 8 - 50), and an additional influence is determined on the basis of the temporarily stored results (column 5, lines 8 - 50, especially lines 45 - 50, column 9, lines 55-67, and column 10, lines 1-35).

10.2.54. The motivation to use the art of Croix with the art of Microsim would have been the benefits recited in Croix that cells of the circuitry are characterized with both higher speed and higher accuracy relative to previous techniques (column 2, lines 10-16), which would have been recognized by the ordinary artisan as a benefit because higher speed means reduced time for simulation.

10.2.55. The motivation to use the art of Optimizer with the art of MicroSim would have been the benefit recited in Optimizer that the program improves the performance of analog circuits (page xiv, first paragraph). The MicroSim reference also points to the Optimizer reference (MicroSim, pages xxvi and xxviii).

10.2.56. Therefore, as discussed above, it would have been obvious to the ordinary artisan at the time of invention to use the art of Croix and the art of Optimizer with the art of Microsim to obtain the claimed invention.

10.2.57. Regarding claim 13:

10.2.58. MicroSim appears to teach:

10.2.59. A computer program medium on which executable instructions are recorded, the executable instructions

causing a processor unit to execute a process of simulating a technical system (page 1-2, section "What is Pspice A/D");

10.2.60. Microsim does not specifically teach:

10.2.61. a first program segment configured to cause the processor unit to Optimize a set of setting parameters for a required function, the required function being based on the set of setting parameters and a first set of setting constants, the set of setting constants being static during the optimizing, and the set of setting parameters being for design and reaction of the technical system;

10.2.62. Determine a result as a function of the set of setting parameters and based on a request to an external source, the result being in the form of an influence of the set of setting parameters on the technical system;

10.2.63. simulate the technical system based on the result and the setting constants;

10.2.64. a second program segment, adapted to cause the processor unit to temporarily store the result;

10.2.65. wherein the influence of each of a plurality of sets of setting parameters on the technical system is determined by checking the external source, the result of this check is temporarily stored, and an additional influence is determined on the basis of the temporarily stored results.

10.2.66. Optimizer appears to teach:

10.2.67. a first program segment configured to cause the processor unit to Optimize a set of setting parameters for a required function, the required function being based on the set of setting parameters and a set of setting constants, the set of setting constants being static during the optimizing, and the set of setting parameters being for design and reaction of the technical system (pages 1-8 thru 1-10, sections Performance, Evaluation and PSpice Optimizer Expression (especially note in Pspice Optimizer Expression, the use of constants); and pages 6-2 thru 6-4, please note that in figure 6-1 that resistor values for R1, R2, R3 are constants);

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10.2.68. Determine a result as a function of the set of setting parameters and based on a request to an external source, the result being in the form of an influence of the set of setting parameters on the technical system (page xiv, please note that the MicroSim Pspice Optimizer calls the MicroSim Pspice A/D simulator; and page 6-2 and page 6-8, it would have been obvious that the circuit in figure 6-1 was submitted to PSpice A/D for calculating a result);

10.2.69. simulate the technical system based on the result and the setting constants (pages 1-8 thru 1-10, sections Performance, Evaluation and PSpice Optimizer Expression (especially note in Pspice Optimizer Expression, the use of constants));

10.2.70. Croix appears to teach:

10.2.71. Determine a result as a function of the set of setting parameters and based on a request to an external source, the result being in the form of an influence of the set of setting parameters on the technical system (column 5, lines 8 - 50);

10.2.72. a memory adapted to temporarily store the result (column 5, lines 8 - 50);

10.2.73. a first program segment configured to cause the processor unit to temporarily store the result (column 5, lines 8 - 50)

10.2.74. wherein the influence of each of a plurality of sets of setting parameters on the technical system is determined by checking the external source (column 5, lines 8 - 50)., the result of this check is temporarily stored (column 5, lines 8 - 50), and an additional influence is determined on the basis of the temporarily stored results (column 5, lines 8 - 50, especially lines 45 - 50, column 9, lines 55-67, and column 10, lines 1-35).

10.2.75. The motivation to use the art of Croix with the art of Microsim would have been the benefits recited in Croix that cells of the circuitry are characterized with both higher speed and higher accuracy relative to previous techniques (**column 2, lines 10-16**), which would have been recognized by the ordinary artisan as a benefit because higher speed means reduced time for simulation.

10.2.76. The motivation to use the art of Optimizer with the art of MicroSim would have been the benefit recited in Optimizer that the program improves the

performance of analog circuits (page xiv, first paragraph). The MicroSim reference also points to the Optimizer reference (MicroSim, pages xxvi and xxviii).

10.2.77. Therefore, as discussed above, it would have been obvious to the ordinary artisan at the time of invention to use the art of Croix and the art of Optimizer with the art of Microsim to obtain the claimed invention.

10.2.78. Regarding claims 23 and 34:

10.2.79. Microsim appears to teach that a processor unit is further adapted to design the technical system on the basis of the simulation (page xxvi, the unlabeled figure at the bottom of the page, the MicroSim PSpice Optimizer is shown as modifying the MicroSim PspiceA/D simulator; it would have been obvious that the optimizer is adjusting values of a technical system, which is performing design; and page xxviii, MicroSim PSpice Optimizer User Guide paragraph).

10.2.80. Regarding claim 33:

10.2.81. Microsim appears to teach a computer program product including a computer readable medium (page xxxiii, MicroSim's evaluation CD-ROM).

10.3. Claims 8, 29 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Microsim ("MicroSim Pspice A/D & Basics+", June 1997) as modified by Croix and Optimizer as applied to **claims 1-4, 7, 9-15, 20-25, 28, 30-36, 39 and 41-43** above, and further in view of Rai (U.S. Patent Number 6,606,612).

10.3.1. Microsim as modified by Croix and Optimizer teaches a method for simulation of a technical system, as recited in **claims 1-4, 7, 9-15, 20-25, 28, 30-36, 39 and 41-43** above.

10.3.2. Regarding claims 8, 29 and 40:

10.3.3. Microsim does not specifically teach that an additional influence is determined from the results using a neural network.

10.3.4. Rai appears to teach determining an influence from results using a neural network (column 2, lines 50-55).

10.3.5. The motivation to use the art of Rai with the art of Microsim as modified by Croix and Optimizer would have been the benefit recited in Rai that significant cost savings have been realized by using neural nets to interpolate between measurements (column 2, lines 50-55).


10.3.6. Therefore, as discussed above, it would have been obvious to the ordinary artisan at the time of invention to use the art of Rai with the art of Microsim as modified by Croix and Optimizer to produce the claimed invention.

10.4. **Examiner's Note:** Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in their entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Russ Guill whose telephone number is 571-272-7955. The examiner can normally be reached on Monday - Friday 10:00 AM - 6:30 PM.
12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached on 571-272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Any inquiry of a general nature or relating to the status of this application should be directed to the TC2100 Group Receptionist: 571-272-2100.
13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RG

Russ Guill
Examiner
Art Unit 2123

PAUL RODRIGUEZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100